

# index

Vol. 7: 1976

## Issue Numbers:

- 1: January/February
- 2: March/April
- 3: May/June
- 4: July/August
- 5: September/October
- 6: November/December

## A

Academic employment, scientists and engineers, 1976, 6: Back cover  
 Acetal (Delvin), 4: 20  
 Acoustical holography, 5: 33-35  
 Aesthenosphere, 6: 11, 14  
 Agin, Gerald, 5: 12  
 Agriculture, economics, 1: 4, 5  
   research, 5: 36-41  
 Air pollution, 4: 22-28  
 Alaska, 3: 3-8  
 Aldridge, Bill G., 3: 32, 33  
 Almon, Klopfer, 3: 27  
 Annis, Robert, 2: 34  
 Amara, Roy, 1: 16-22  
 Anson, Fred, 5: 29  
 Aphasia, 2: 16-19  
 Appelzweig, Mortimer H., 2: 30  
 Arctic, 3: 3-8  
 Arrow, Kenneth J., 3: 26  
 Arvikar, Rameshwar J., 6: 32  
 Asimov, Isaac, 2: 38  
 Astronomy, 3: 9-12; 4: 29-33  
   telescope mirrors, 6: 16-21  
 Atmospheric chemistry, 4: 22-28  
 Automation, 5: 8-14, 15-21  
 Axons, 2: 27-32

## B

Bach-y-Rita, Paul, 2: 40  
 Bahniuk, Eugene, 6: 31-34  
 Banking, electronic, 1: 23-28  
 Bartholomew, Roberts, 2: 35  
 Bartlett, Howard D., 5: 40  
 Baruch, Bernard, 1: 31  
 Basement rocks, profiles, 6: 9-15  
 Basin and Range Province, 6: 10-13  
 Batch manufacturing, automated, 5: 8, 14, 15-21  
 Bedford, Brian, 1: 30  
 Bell, Max, 6: 22-27  
 Belugi, Ursula, 2: 16  
 Belytschko, Ted B., 6: 30, 31, 34  
 Berger, Hans, 2: 38  
 Bering, Vitus, 3: 3  
 Berry, Guy, 4: 21  
 Betelgeuse, 4: 30, 31, 33; 6: 21  
 Binford, Thomas O., 5: 8-14  
 Biological technology education, 3: 31  
 Biomechanics, orthopedic, 6: 29-34  
 Black holes, 3: 9, 12  
 Bloom, Floyd, 2: 28  
 Biochemistry, plants, 4: 12-15  
 Bock, Carl, 5: 33, 35  
 Bodman, Charles, 3: 30, 31  
 Bohr, Neils, 6: 11, 15  
 Bolles, Robert C., 5: 13  
 Bollinger, G. A., 4: 8  
 Boothroyd, Geoffrey, 5: 14  
 Boudart, Michel, 5: 29  
 Braginsky, Vladimir, 3: 12  
 Brain research (special issue), 2  
 Brain scanners, X-ray, 6: 3  
 Brewster, Gordon, 1: 13  
 Brill, Winston J., 5: 24, 26  
 Brooks, Jared, 4: 5  
 Brown, Warren, 2: 18  
 Burstein, Albert, 6: 33

## C

Cahill, Thomas, 6: 36  
 Calculators, hand-held, and mathematics education, 6: 22-27  
 Carter, Anne P., 3: 28  
 Catalysis, enzymatic and synthetic, 5: 22-29  
 Caton, Richard, 2: 38  
 Cerro Tololo telescope, 6: 17, 18, 21  
 Cer-Vit mirrors, telescope, 6: 18  
 Chang, S. G., 4: 28  
 Charleston earthquake, 4: 8, 10  
 Chatt, Joseph, 5: 26  
 Chemical technology education, 3: 30

Chemistry, industrial, 5: 22-29  
 Chen, Pictaw, 5: 39, 40  
 Chern, Bernard, 5: Inside cover  
 Childress, James, 3: 17-19  
 Chimpanzee-human communication, 2: 8  
 Clark, Alvan, 6: 17  
 Clark, Edward S., 4: 20, 21  
 Clark, John D., 2: 6  
 Clometrics, 1: 2-7  
 Cognition, 2: 8-13  
 Cohen, David, 2: 41  
 Cohen, David, 2: 22, 25  
 Colleges, early-entry, 6: 35-39  
   technician training, 3: 29-33  
 Collman, James, 5: 29  
 Computerized conferences, 1: 16-22  
 Computerized tomography, 6: 3-8  
 Computers, 1: 16-22; 2: 20-25; 4: 32, 33; 5: 10-21;  
   6: 3-8  
 Congress, U.S., 1: 12, 24; 5: 4, 6  
 Conrad, Alfred, 1: 2  
 Construction, tunnels, 5: 31-35  
 Continental basement, 6: 9-15  
 Continental Shelf, 3: 4, 5  
 Cooke, J. Robert, 5: 38  
 Cooking processes, research, 5: 39  
 Cooper, Lynn, 2: 13  
 Coulter, Henry, 4: 11  
 Cowan, Jack D., 2: 23, 25  
 Cox, Edwin, 1: 24  
 Crum, Ralph G., 3: 32

## D

Daddario, Emilio Q., 1: 24  
 Daly, J. M., 4: 13, 15  
 Davis, Douglas, 4: 25  
 Davis, Eugenia A., 5: 39  
 Davis, Lance, 1: 2, 5, 6  
 Dayton, Paul, 3: 14, 15, 19  
 Dean, John, 1: 27  
 Deep-sea ecology, 3: 13-19  
 DeLong, Mahlon, 2: 36  
 Dendrites, 2: 27-32  
 Denison, Edward F., 5: 3, 4  
 Dev, Parvati, 2: 29  
 Devine, James F., 4: 11  
 DeVries, K. Lawrence, 4: 17  
 de Wied, David, 2: 30, 31  
 Dewitt, Calvin, 1: 32  
 Dewson, James H., 2: 7, 19  
 Diamond, Marion C., 2: 32  
 Dick, Richard, 3: 23  
 Dobreiner, Joanne, 5: 26  
 Doctoral scientists and engineers: 1975, 5: Back  
   cover  
 Doniger, Maurice, 2: 38  
 Douglass, David, 3: 11, 12  
 Downs, Jack, 1: 32  
 Drake, Daniel, 4: 5  
 Duda, Richard, 5: 12  
 Dutton, C. E., 4: 11

## E

Eads, George, 5: 6, 7  
 Earthquakes, 4: 2-11; 6: 10  
 Easterlin, Richard, 1: 4  
 Eccles, Sir John, 2: 22  
 Eckert, Roger, 2: 12  
 Ecological reserves, 1: 29-33  
 Ecology, deep-sea, 3: 13-19  
 Econometrics, 1: 2; 3: 27  
 Economic analysis, input-output, 3: 25-28  
 Economic growth and technology, 5: 2-7  
 Economic history, 1: 2-7  
 Economy, Alaska, 3: 3-8  
 Education, colleges, early entry, 6: 35-39  
   mathematics and calculators, 6: 22-27  
   technicians, 3: 29-33  
 Einstein, Albert, 3: 9  
 Eimas, Peter, 2: 11  
 Electroencephalography, 2: 13, 18, 38-41  
 Electronic funds transfer, 1: 23-28

Ellis, W. R., 5: 38  
 Encephalization, 2: 3-7  
 Energy resources, 3: 3-7  
 Engen, Trygg, 2: 35  
 Engerman, Stanley, 1: 2, 4, 7  
 Engrams, 2: 8-13, 29  
 Environmental quality, 5: 6, 7  
 Environmental research, 1: 29-33  
 Epilepsy, 2: 18, 19, 38-41  
 Ernst, Martin, 1: 24, 27, 28  
 Eskimos, 3: 4-8  
 Everts, Edward V., 2: 36  
 Experimental Ecological Reserves (EER) Project,  
   1: 29-33

## F

Fabrics, superstrong, 4: 16-21  
 Faculty research, support, 1975, 1: Back cover  
 Fairbank, William M., 3: 11  
 Falk, Dean, 2: 6  
 Farrington, John, 3: 19  
 Fault zones, 4: 2-11  
 Federal aid to States, 1: 8-12  
 Federal lands, 1: 33; 3: 7  
 Federal R&D support to health between 1969 and  
   1976, 2: Back cover  
 Feigenbaum, Edward, 2: 24  
 Fellers, John, 4: 21  
 Fertilizer, 5: 22-26  
 Fibers, superstrong, 4: 16-21  
 Fischer, Franz, 5: 27  
 Fischer, Victor, 3: 5  
 Fisheries, Alaska, 3: 3, 5  
 Fishlow, Albert, 1: 5, 6  
 Fletcher, Jon, 4: 11  
 Flory, Paul, 4: 19  
 Fogel, Robert, 1: 2-7  
 Foods, physical properties, 5: 36-41  
 Food technology, 5: 36-41  
 Forest products, Alaska, 3: 3, 5  
 Forest research, 1: 30-33  
 Fossil brain studies, 2: 2-7  
 Fouts, Roger, 2: 8  
 Fridley, Robert B., 5: 39  
 Fromkin, Victoria, 2: 16, 17, 18  
 Frost, Barrie, 2: 34  
 Fuel cells, catalytic, 5: 29  
 Fuzessery, Zoltan, 1: 17

## G

Gaard, Gary, 4: 13  
 Gagosian, Robert, 3: 19  
 Galante, Jorge, 6: 30  
 Gallman, Robert, 1: 4, 5  
 Galskoy, Alexandre, 5: 19  
 Gardner, Allen, 2: 8  
 Gardner, Beatrice T., 2: 8  
 General revenue sharing, 1: 8-12  
 Genetics, plant, 4: 12-15  
 Geology, deep crust, 6: 9-15  
   tunnel boring, 3: 31-35  
 Glass, low-thermal-expansion, 6: 17, 18  
   variable refractive (gradient) index, 1: 13-15  
 Gestalt, 2: 6, 7  
 Gjaever, Ivar, 2: 29  
 Goldberger, Nancy, 6: 38, 39  
 Gols, A. George, 3: 27  
 Gordon, Joan, 5: 39  
 Gormezano, Isidore, 2: 10  
 Gradient index lenses, 1: 13-15  
 Graham, Richard A., 4: 23  
 Graham, Terry, 4: 14  
 Gravitational waves, 3: 9-12  
 Graybiel, Ann M., 2: 31  
 Greenberg, Robert, 4: 27  
 Greengard, Paul, 2: 28  
 Greenough, William, 2: 32  
 Grenell, Robert, 2: 29, 30, 31  
 Griliches, Zvi, 5: 4  
 Grossman, David G., 5: 9  
 Gross national product, 1: 4, 5; 5: 7

Grubbs, Robert H., 5: 27-29  
 Gullett, William, 3: 22

## H

Haber-Bosch process, 5: 22, 24  
 Hale telescope, 6: 17  
 Hall, Elizabeth, 6: 35  
 Halpern, Jack, 5: 26, 29  
 Hamann, D. D., 3: 38  
 Hamilton, William O., 3: 11  
 Handelman, Eileen, 6: 36-39  
 Hanna, Milford A., 5: 41  
 Hardy, Ralph W. F., 5: 26  
 Harvey, Jack, 6: 21  
 Heart, dynamic X-rays, 6: 3-8  
 Hebb, Donald, 2: 40  
 Hellmers, Henry, 1: 32  
 Hensler, Raymond, 1: 14, 15  
 Herman, Gabor T., 6: 5-8  
 Herschel, Sir William, 6: 17  
 Hessler, Robert, 3: 14-16, 19  
 Hicks, Sir John, 3: 26  
 Hilt, Glenn, 4: 24  
 History, quantitative, 1: 2-7  
 Hodgkin, Alan L., 2: 25  
 Holland, John, 2: 22, 23, 25  
 Holloway, Ralph, 2: 6, 7  
 Holography, 5: 34  
 Hominid brain, 2: 5-7  
 Hook, Gerald, 5: 39  
 Hounsfield, G. N., 6: 3  
 Hoyle, Graham, 2: 11-13  
 Hubel, David, 2: 26, 31, 32, 34  
 Hughes, John, 2: 29  
 Hughes, Jonathan, 1: 6  
 Human body, engineering studies, 6: 29-34  
 Hutchins, Robert, 6: 35  
 Huxley, Andrew F., 2: 25  
 Huxley, Thomas, 2: 5  
 Hyden, Holger, 2: 29, 31  
 Hydrocarbons, catalytic production, 5: 27-29

## I

Immerzeel, George, 6: 27  
 Immunology, plant, 4: 12-15  
 Inflation, 1: 10  
 Information systems, 1: 18, 19  
 Input-output analysis, economic, 3: 25-28  
 Insect brain, 2: 11, 12, 25  
 Intelligence, 2: 5, 7, 20-25  
 Interferometry, astronomy, 4: 31, 33  
 Interindustry analysis, 3: 25-28  
 Inventions and productivity, 5: 3-5  
 Isaacs, John, 3: 15  
 Isard, Walter, 3: 28  
 Jackson, John Hughlings, 2: 35  
 Jannasch, Holger, 3: 19  
 Jasper, Herbert H., 2: 36  
 Jerrison, Harry, 2: 4-6  
 John, E. Roy, 2: 38-41  
 Jurnars, Peter, 3: 16

## K

Kahneman, Daniel, 2: 13  
 Kamien, Morton, 5: 5, 6  
 Kaniss, Phyllis, 3: 28  
 Kastin, Abba, 2: 30  
 Kaufman, Sidney, 6: 10, 13, 15  
 Kazarian, Leon, 6: 34  
 Kelman, Arthur, 4: 12  
 Kendrick, John, 5: 6, 7  
 Kevlar, 4: 20, 21  
 Kitt Peak National Observatory, 6: 17, 18, 21  
 Klein, Judith, 1: 4  
 Knowles, William S., 5: 28  
 Konishi, Mark, 2: 11  
 Kornhuber, Hans, 2: 36  
 Kosterlitz, Hans, 2: 29  
 Krashen, Stephen, 2: 17, 18  
 Krigbaum, William R., 4: 21  
 Kuchler, A. W., 1: 30

# index

Vol. 7: 1976

## Issue Numbers:

- 1: January/February
- 2: March/April
- 3: May/June
- 4: July/August
- 5: September/October
- 6: November/December

## A

Academic employment, scientists and engineers, 1976, 6: Back cover  
 Acetal (Delvin), 4: 20  
 Acoustical holography, 5: 33-35  
 Aesthenosphere, 6: 11, 14  
 Agin, Gerald, 5: 12  
 Agriculture, economics, 1: 4, 5  
   research, 5: 36-41  
 Air pollution, 4: 22-28  
 Alaska, 3: 3-8  
 Aldridge, Bill G., 3: 32, 33  
 Almon, Klopfer, 3: 27  
 Annis, Robert, 2: 34  
 Amara, Roy, 1: 16-22  
 Anson, Fred, 5: 29  
 Aphasia, 2: 16-19  
 Appelzweig, Mortimer H., 2: 30  
 Arctic, 3: 3-8  
 Arrow, Kenneth J., 3: 26  
 Arvikar, Rameshwar J., 6: 32  
 Asimov, Isaac, 2: 38  
 Astronomy, 3: 9-12; 4: 29-33  
   telescope mirrors, 6: 16-21  
 Atmospheric chemistry, 4: 22-28  
 Automation, 5: 8-14, 15-21  
 Axons, 2: 27-32

## B

Bach-y-Rita, Paul, 2: 40  
 Bahniuk, Eugene, 6: 31-34  
 Banking, electronic, 1: 23-28  
 Bartholomew, Roberts, 2: 35  
 Bartlett, Howard D., 5: 40  
 Baruch, Bernard, 1: 31  
 Basement rocks, profiles, 6: 9-15  
 Basin and Range Province, 6: 10-13  
 Batch manufacturing, automated, 5: 8, 14, 15-21  
 Bedford, Brian, 1: 30  
 Bell, Max, 6: 22-27  
 Belugi, Ursula, 2: 16  
 Belytschko, Ted B., 6: 30, 31, 34  
 Berger, Hans, 2: 38  
 Bering, Vitus, 3: 3  
 Berry, Guy, 4: 21  
 Betelgeuse, 4: 30, 31, 33; 6: 21  
 Binford, Thomas O., 5: 8-14  
 Biological technology education, 3: 31  
 Biomechanics, orthopedic, 6: 29-34  
 Black holes, 3: 9, 12  
 Bloom, Floyd, 2: 28  
 Biochemistry, plants, 4: 12-15  
 Bock, Carl, 5: 33, 35  
 Bodman, Charles, 3: 30, 31  
 Bohr, Neils, 6: 11, 15  
 Bolles, Robert C., 5: 13  
 Bollinger, G. A., 4: 8  
 Boothroyd, Geoffrey, 5: 14  
 Boudart, Michel, 5: 29  
 Braginsky, Vladimir, 3: 12  
 Brain research (special issue), 2  
 Brain scanners, X-ray, 6: 3  
 Brewster, Gordon, 1: 13  
 Brill, Winston J., 5: 24, 26  
 Brooks, Jared, 4: 5  
 Brown, Warren, 2: 18  
 Burstein, Albert, 6: 33

## C

Cahill, Thomas, 6: 36  
 Calculators, hand-held, and mathematics education, 6: 22-27  
 Carter, Anne P., 3: 28  
 Catalysis, enzymatic and synthetic, 5: 22-29  
 Caton, Richard, 2: 38  
 Cerro Tololo telescope, 6: 17, 18, 21  
 Cer-Vit mirrors, telescope, 6: 18  
 Chang, S. G., 4: 28  
 Charleston earthquake, 4: 8, 10  
 Chatt, Joseph, 5: 26  
 Chemical technology education, 3: 30

Chemistry, industrial, 5: 22-29  
 Chen, Pictaw, 5: 39, 40  
 Chern, Bernard, 5: Inside cover  
 Childress, James, 3: 17-19  
 Chimpanzee-human communication, 2: 8  
 Clark, Alvan, 6: 17  
 Clark, Edward S., 4: 20, 21  
 Clark, John D., 2: 6  
 Clometrics, 1: 2-7  
 Cognition, 2: 8-13  
 Cohen, David, 2: 41  
 Cohen, David, 2: 22, 25  
 Colleges, early-entry, 6: 35-39  
   technician training, 3: 29-33  
 Collman, James, 5: 29  
 Computerized conferences, 1: 16-22  
 Computerized tomography, 6: 3-8  
 Computers, 1: 16-22; 2: 20-25; 4: 32, 33; 5: 10-21;  
   6: 3-8  
 Congress, U.S., 1: 12, 24; 5: 4, 6  
 Conrad, Alfred, 1: 2  
 Construction, tunnels, 5: 31-35  
 Continental basement, 6: 9-15  
 Continental Shelf, 3: 4, 5  
 Cooke, J. Robert, 5: 38  
 Cooking processes, research, 5: 39  
 Cooper, Lynn, 2: 13  
 Coulter, Henry, 4: 11  
 Cowan, Jack D., 2: 23, 25  
 Cox, Edwin, 1: 24  
 Crum, Ralph G., 3: 32

## D

Daddario, Emilio Q., 1: 24  
 Daly, J. M., 4: 13, 15  
 Davis, Douglas, 4: 25  
 Davis, Eugenia A., 5: 39  
 Davis, Lance, 1: 2, 5, 6  
 Dayton, Paul, 3: 14, 15, 19  
 Dean, John, 1: 27  
 Deep-sea ecology, 3: 13-19  
 DeLong, Mahlon, 2: 36  
 Dendrites, 2: 27-32  
 Denison, Edward F., 5: 3, 4  
 Dev, Parvati, 2: 29  
 Devine, James F., 4: 11  
 DeVries, K. Lawrence, 4: 17  
 de Wied, David, 2: 30, 31  
 Dewitt, Calvin, 1: 32  
 Dewson, James H., 2: 7, 19  
 Diamond, Marion C., 2: 32  
 Dick, Richard, 3: 23  
 Dobreiner, Joanne, 5: 26  
 Doctoral scientists and engineers: 1975, 5: Back cover  
 Doniger, Maurice, 2: 38  
 Douglass, David, 3: 11, 12  
 Downs, Jack, 1: 32  
 Drake, Daniel, 4: 5  
 Duda, Richard, 5: 12  
 Dutton, C. E., 4: 11

## E

Eads, George, 5: 6, 7  
 Earthquakes, 4: 2-11; 6: 10  
 Easterlin, Richard, 1: 4  
 Eccles, Sir John, 2: 22  
 Eckert, Roger, 2: 12  
 Ecological reserves, 1: 29-33  
 Ecology, deep-sea, 3: 13-19  
 Econometrics, 1: 2; 3: 27  
 Economic analysis, input-output, 3: 25-28  
 Economic growth and technology, 5: 2-7  
 Economic history, 1: 2-7  
 Economy, Alaska, 3: 3-8  
 Education, colleges, early entry, 6: 35-39  
   mathematics and calculators, 6: 22-27  
   technicians, 3: 29-33  
 Einstein, Albert, 3: 9  
 Eimas, Peter, 2: 11  
 Electroencephalography, 2: 13, 18, 38-41  
 Electronic funds transfer, 1: 23-28

Ellis, W. R., 5: 38  
 Encephalization, 2: 3-7  
 Energy resources, 3: 3-7  
 Engen, Trygg, 2: 35  
 Engerman, Stanley, 1: 2, 4, 7  
 Engrams, 2: 8-13, 29  
 Environmental quality, 5: 6, 7  
 Environmental research, 1: 29-33  
 Epilepsy, 2: 18, 19, 38-41  
 Ernst, Martin, 1: 24, 27, 28  
 Eskimos, 3: 4-8  
 Everts, Edward V., 2: 36  
 Experimental Ecological Reserves (EER) Project, 1: 29-33

## F

Fabrics, superstrong, 4: 16-21  
 Faculty research, support, 1975, 1: Back cover  
 Fairbank, William M., 3: 11  
 Falk, Dean, 2: 6  
 Farrington, John, 3: 19  
 Fault zones, 4: 2-11  
 Federal aid to States, 1: 8-12  
 Federal lands, 1: 33; 3: 7  
 Federal R&D support to health between 1969 and 1976, 2: Back cover  
 Feigenbaum, Edward, 2: 24  
 Fellers, John, 4: 21  
 Fertilizer, 5: 22-26  
 Fibers, superstrong, 4: 16-21  
 Fischer, Franz, 5: 27  
 Fischer, Victor, 3: 5  
 Fisheries, Alaska, 3: 3, 5  
 Fishlow, Albert, 1: 5, 6  
 Fletcher, Jon, 4: 11  
 Flory, Paul, 4: 19  
 Fogel, Robert, 1: 2-7  
 Foods, physical properties, 5: 36-41  
 Food technology, 5: 36-41  
 Forest products, Alaska, 3: 3, 5  
 Forest research, 1: 30-33  
 Fossil brain studies, 2: 2-7  
 Fouts, Roger, 2: 8  
 Fridley, Robert B., 5: 39  
 Fromkin, Victoria, 2: 16, 17, 18  
 Frost, Barrie, 2: 34  
 Fuel cells, catalytic, 5: 29  
 Fuzessery, Zoltan, 1: 17

## G

Gaard, Gary, 4: 13  
 Gagosian, Robert, 3: 19  
 Galante, Jorge, 6: 30  
 Gallman, Robert, 1: 4, 5  
 Galskoy, Alexandre, 5: 19  
 Gardner, Allen, 2: 8  
 Gardner, Beatrice T., 2: 8  
 General revenue sharing, 1: 8-12  
 Genetics, plant, 4: 12-15  
 Geology, deep crust, 6: 9-15  
   tunnel boring, 3: 31-35  
 Glass, low-thermal-expansion, 6: 17, 18  
   variable refractive (gradient) index, 1: 13-15  
 Gestalt, 2: 6, 7  
 Gjaever, Ivar, 2: 29  
 Goldberger, Nancy, 6: 38, 39  
 Gols, A. George, 3: 27  
 Gordon, Joan, 5: 39  
 Gormezano, Isidore, 2: 10  
 Gradient index lenses, 1: 13-15  
 Graham, Richard A., 4: 23  
 Graham, Terry, 4: 14  
 Gravitational waves, 3: 9-12  
 Graybiel, Ann M., 2: 31  
 Greenberg, Robert, 4: 27  
 Greengard, Paul, 2: 28  
 Greenough, William, 2: 32  
 Grenell, Robert, 2: 29, 30, 31  
 Griliches, Zvi, 5: 4  
 Grossman, David G., 5: 9  
 Gross national product, 1: 4, 5; 5: 7

Grubbs, Robert H., 5: 27-29  
 Gullett, William, 3: 22

## H

Haber-Bosch process, 5: 22, 24  
 Hale telescope, 6: 17  
 Hall, Elizabeth, 6: 35  
 Halpern, Jack, 5: 26, 29  
 Hamann, D. D., 3: 38  
 Hamilton, William O., 3: 11  
 Handelman, Eileen, 6: 36-39  
 Hanna, Milford A., 5: 41  
 Hardy, Ralph W. F., 5: 26  
 Harvey, Jack, 6: 21  
 Heart, dynamic X-rays, 6: 3-8  
 Hebb, Donald, 2: 40  
 Hellmers, Henry, 1: 32  
 Hensler, Raymond, 1: 14, 15  
 Herman, Gabor T., 6: 5-8  
 Herschel, Sir William, 6: 17  
 Hessler, Robert, 3: 14-16, 19  
 Hicks, Sir John, 3: 26  
 Hilt, Glenn, 4: 24  
 History, quantitative, 1: 2-7  
 Hodgkin, Alan L., 2: 25  
 Holland, John, 2: 22, 23, 25  
 Holloway, Ralph, 2: 6, 7  
 Holography, 5: 34  
 Hominid brain, 2: 5-7  
 Hook, Gerald, 5: 39  
 Hounsfield, G. N., 6: 3  
 Hoyle, Graham, 2: 11-13  
 Hubel, David, 2: 26, 31, 32, 34  
 Hughes, John, 2: 29  
 Hughes, Jonathan, 1: 6  
 Human body, engineering studies, 6: 29-34  
 Hutchins, Robert, 6: 35  
 Huxley, Andrew F., 2: 25  
 Huxley, Thomas, 2: 5  
 Hyden, Holger, 2: 29, 31  
 Hydrocarbons, catalytic production, 5: 27-29

## I

Immerzeel, George, 6: 27  
 Immunology, plant, 4: 12-15  
 Inflation, 1: 10  
 Information systems, 1: 18, 19  
 Input-output analysis, economic, 3: 25-28  
 Insect brain, 2: 11, 12, 25  
 Intelligence, 2: 5, 7, 20-25  
 Interferometry, astronomy, 4: 31, 33  
 Interindustry analysis, 3: 25-28  
 Inventions and productivity, 5: 3-5  
 Isaacs, John, 3: 15  
 Isard, Walter, 3: 28  
 Jackson, John Hughlings, 2: 35  
 Jannasch, Holger, 3: 19  
 Jasper, Herbert H., 2: 36  
 Jerrison, Harry, 2: 4-6  
 John, E. Roy, 2: 38-41  
 Jurnars, Peter, 3: 16

## K

Kahneman, Daniel, 2: 13  
 Kamien, Morton, 5: 5, 6  
 Kaniss, Phyllis, 3: 28  
 Kastin, Abba, 2: 30  
 Kaufman, Sidney, 6: 10, 13, 15  
 Kazarian, Leon, 6: 34  
 Kelman, Arthur, 4: 12  
 Kendrick, John, 5: 6, 7  
 Kevlar, 4: 20, 21  
 Kitt Peak National Observatory, 6: 17, 18, 21  
 Klein, Judith, 1: 4  
 Knowles, William S., 5: 28  
 Konishi, Mark, 2: 11  
 Kornhuber, Hans, 2: 36  
 Kosterlitz, Hans, 2: 29  
 Krashen, Stephen, 2: 17, 18  
 Krigbaum, William R., 4: 21  
 Kuchler, A. W., 1: 30

- Kumar, Mahesh, 5: 40  
Kung, Ching, 2: 12  
Kuznets, Simon, 1: 2, 4
- L**  
Laborde, Monroe, 6: 33  
Landsberg, Helmut, 4: 24  
Language, 2: 6, 7, 8, 10, 11, 15-19, 22  
Lashley, Karl, 2: 8  
Lauff, George, 1: 33  
Lawless, Harry, 2: 35  
Leakey, Richard, 2: 7  
Learning, 2: 8-13, 29-31, 38-41  
Lederberg, Joshua, 2: 24  
Ledley, Robert, 6: 3  
Lenneberg, E. H., 2: 17  
Lenses, gradient index, 1: 13-15  
Lentz, Thomas L., 2: 29  
Leonardo da Vinci, 6: 34  
Leontief, Wassily W., 3: 25-28  
Levy, Jerre, 2: 17, 18  
Li, T. Y., 4: 24  
Lieberman, Alvin, 2: 11  
Lieberman, Philip, 2: 6  
Lighthill, Sir James, 2: 20-25  
Lindert, Peter, 1: 3  
Linguistics, 2: 15-19  
Lipinski, Hubert M., 1: 20  
Liquid crystals, 4: 21  
Lithosphere, 6: 11, 14  
Loevinger, Jane, 6: 39  
Long, Robert, 1: 27  
Lorenz, Konrad, 2: 11  
Lung scans, X-ray, 6: 7  
Lynds, Roger, 6: 21
- M**  
Machine tools, NC, 5: 16-21  
MacLean, Paul D., 2: 3, 4  
Magma chambers, 6: 12, 13  
Magneto-Encephalograms, 2: 41  
Mammal brain, 2: 3-7, 8, 10  
Man in the Arctic Program, 3: 3-8  
Mansfield, Edwin, 5: 4-6  
Manufacturing, automated, 5: 8-21  
Manufacturing, lenses, 1: 13-15  
Marler, Peter, 2: 10, 11  
Marsh, James, 2: 18  
Marston, Elizabeth V., 5: 39  
Mass production, 5: 15  
Mathematics education and calculators, 6: 22-27  
Mayall telescope, 6: 17, 18, 21  
Mayo Clinic, 6: 3-8  
McAdam, Dale, 2: 18  
McCarthy, John, 2: 24  
McCloskey, Donald, 1: 6, 7  
McCusker, Terence, 3: 32  
Medicine, orthopedic, 6: 29-34  
X-rays, 6: 3-8  
Mercalli Scale, 4: 5, 6  
Meyers, John, 1: 2  
Memory, 2: 8-13, 29, 38  
Metcalf, Theodore, 3: 23, 24  
Meteorology, 4: 22-28  
Midplate earthquakes, 6: 2-11; 6: 10  
Miller, Lyle, 2: 30  
Mirrors, telescope, 6: 16-21  
Mirsky, Alfred, 2: 30  
Mississippi Valley earthquakes, 4: 2-11  
Mitchell, Donald, 2: 34  
Mitchell, Edwin, 6: 14  
Miyawaki, Kunito, 2: 11  
Moavenzadeh, Fred, 3: 35  
Mohorovicic discontinuity, 6: 11-13  
Mohenin, Nuri, 3: 39-41  
Montor, Karel, 2: 41  
Moon, subsurface geology, 6: 14  
Moore, Duncan, 1: 14, 15  
Morrow, Charles T., 3: 40  
Motor functions, brain, 2: 35, 36  
Muertteries, Earl L., 5: 28-29  
Multiple sclerosis, 6: 33  
Musculo-skeletal system, engineering studies, 6: 29-34
- N**  
National Science Foundation, *see* NSF  
Natural gas, Alaska, 3: 3-7  
Nature preserves, 1: 33  
Nelson, David A., 3: 29, 30  
Nelson, Richard, 5: 6  
Neurons, 2: 8-13, 18, 20-25, 26-32  
Neuroscience (special issue), 2  
Nevins, James L., 5: 9, 12, 14  
New Madrid Fault Zone, 4: 2-11  
Newmarch, William, 1: 6  
Newton, Isaac, 3: 9  
Nitrogen fixation, 5: 22-26  
Nitzan, David, 5: 9, 13, 14  
Nordhaus, William, 5: 7  
North, Douglas, 1: 5  
Novakov, Tihomir, 4: 28  
Nottebohm, Fernando, 2: 11
- NSF Divisions**  
Advanced Productivity Research and Technology, 5: 7, 35  
Astronomical Sciences, 6: 21  
Engineering, 1: 15  
Environmental Biology, 1: 33  
Ocean Sciences, 3: 19  
Physics, 3: 12  
Science Education Development and Research, 3: 33; 6: 27  
Social Sciences, 1: 7; 3: 8
- NSF Offices**  
Polar Programs, 3: 8  
Science Information Service, 1: 22
- NSF Programs**  
Access Improvement, 1: 22  
Advanced Renewable Resources Research and Technology, 5: 29  
Arctic Research, 3: 8  
Biochemistry, 4: 15  
Biological Oceanography, 3: 19  
Biological Research Resources, 1: 33  
Computer Research, 1: 22  
Economics, 1: 7; 3: 28; 5: 7  
Electrical and Optical Communications, 1: 15  
Geophysics, 6: 11; 6: 15  
Intelligent Systems, 6: 8  
Polymers, 4: 21  
Production Research and Technology, 5: 21  
Public Policy and Economic Productivity, 1: 12  
Public Sector Technology, 1: 22  
Regional Environmental Systems, 3: 24  
Restructuring the Undergraduate Learning Environment, 6: 39  
Science and Engineering Technology Education (SETEP), 3: 29  
Solid Mechanics, 5: 41; 6: 34  
Synthetic, Inorganic, and Organometallic Chemistry, 5: 29  
Technology Assessment, 1: 28  
Trace Contaminants, 4: 28
- NSF Sections**  
Astronomy Centers, 4: 33  
Astronomy Research, 4: 33  
Computer Sciences, 6: 8  
Nuttli, Otto W., 4: 4-11  
Nylon, 4: 16, 17, 20
- O**  
O'Brien, Michael, 3: 38  
Oceanography, 3: 13-19  
Ockenga, Earl, 6: 27  
Oh, Tae H., 2: 29  
Oil, Alaska, 3: 3-7  
seismic exploration, 6: 10  
Olds, James, 2: 10  
Oliver, Jack, 6: 9-15  
Optical industry, U.S., 1: 13-15  
Orthopedics, engineering studies, 6: 29-34  
Oxo process, 5: 27-29
- P**  
Pak, William, 2: 12  
Parker, John, 1: 10-12  
Parker, William, 1: 2, 4, 5, 7  
Parkinson's disease, 2: 28, 36  
Parks, William, 5: 14  
Partridge, L. Donald, 2: 12  
Pathogens, plant, 4: 12-15  
Paul, Richard, 2: 11  
Pavitt, Keith, 5: 6  
Pavlovian conditioning, 2: 10, 29  
Penfield, Wilder, 2: 40  
Petroleum, *see* Oil  
Photoelectric image tubes, 4: 30-33  
Piekarz, Rolf, 5: 7  
Pierce, William L., 4: 4  
Pipeline, Alaska, 3: 4-7  
Pittman, Charles U., Jr., 3: 29  
Pitts, James N., Jr., 4: 23, 25  
Plant diseases, 4: 12-15  
Plastic molding, automated, 5: 19, 20  
Plastics, superstrong, 4: 16-21  
Plate tectonics, 6: 2-11; 6: 9-15  
Pollution, 3: 20-24; 4: 22-28  
Polishuk, Paul, 1: 18  
Polyethylene, 4: 20, 21  
Polymers, superstrong, 4: 16-21  
Porter, Roger, 4: 20, 21  
Posner, Michael I., 2: 13  
Premack, David, 2: 8  
Price, R. I. (Letter), 1: Inside front cover  
Price, Ted O., 5: 31, 34  
Primate brain, 2: 3-8, 19  
Programmable machines, 5: 9-14  
Prostheses, design, 6: 32, 34
- Q**  
Quartz mirrors, telescope, 6: 17, 18
- R**  
Radar, tunnel boring, 5: 33, 34  
Radinsky, Leonard, 2: 5  
Radiography, 6: 3-8  
Radon, Johan, 6: 4  
Rathbone, Michael P., 2: 29  
Recessions, 1: 4, 10  
Reflexes, 2: 10-12, 29  
Reiter, Stanley, 1: 6  
Reitman, Walter R., 2: 23, 25  
Relativity, 3: 9  
Reptilian brain, 2: 3, 4  
Research Applied to National Needs (RANN), 1: 12, 22, 28; 3: 24; 4: 28  
Revenue sharing, 1: 8-12  
Richter Scale, 4: 5  
Rift systems, geology, 6: 12-15  
Rio Grande Rift, 6: 12-15  
Ritman, Erik, 6: 5  
Robb, Richard, 6: 5  
Robbins, Richard J., 3: 32, 33, 34  
Roberts, Eugene, 2: 28  
Robison, Bruce, 3: 17  
Robots, industrial, 5: 8-14  
Rosen, Benjamin M., 6: 22  
Rosen, Charles A., 5: 12-14  
Roth, James F., 5: 28  
Rowe, Gilbert, 3: 19  
Rozenzweig, Mark, 3: 32  
Rubber, 4: 18, 19  
Rubin, Llewellyn A., 3: 33-35  
Rumbaugh, Duane M., 2: 8
- S**  
Sagik, Bernard, 3: 23, 24  
Samuel, Arthur, 2: 23  
San Andreas Fault, 4: 2-6  
Sanders, Howard, 3: 14, 16  
Sanford, Alan R., 6: 12, 13  
San Francisco earthquake, 4: 2-6  
Sbar, Marc, 4: 8, 11  
Scheffer, Robert, 4: 13, 14  
Scheinman, Victor, 6: 11  
Schevill, Helen, 2: 40, 41  
Schizophrenia, 2: 28  
Schmitt, Francis O., 2: 28-32  
Schrauzer, G. N., 5: 26  
Schultz, Albert B., 6: 30, 31, 34  
Schwartz, Nancy, 5: 5, 6  
Science base, manufacturing, 5: 15-21  
Scoliosis, 6: 30  
Scripps Institution, 3: 14  
Seireg, Ali, 6: 32, 34  
Seismic reflection profiles, 6: 9-15  
Semon, Richard, 2: 8  
Sensors, robot, 5: 12-14  
Sensory systems, 2: 33-35  
Sequeira, Luis, 4: 12, 14  
Sewage sludge disposal, 3: 20-24  
Shepard, Alan, 6: 14  
Shepard, Roger N., 2: 13  
Shepherd, Gordon, 2: 29, 32  
Sherrington, Sir Charles S., 2: 35  
Shilov, Alexander E., 5: 26, 29  
Ship traffic (Letter), 1: Inside front cover  
Shirts, Gary, 1: 20  
Shumway, Richard K., 6: 24  
Sign language, 2: 8, 16  
Simon's Rock Early College, 6: 35-39  
Skeleton, human, engineering studies, 6: 29-34  
Slavery, economics, 1: 2, 5, 7  
Sludge disposal, 3: 20-24  
Smith, Barry, 2: 29  
Smith, C. U. M., 2: 38  
Smith, James, 3: 23, 24  
Smith, Kenneth, 3: 19  
Smog, 4: 22-28  
Social problems, Alaska, 3: 7, 8  
Sokoloff, Louis E., 2: 32  
Sonar, tunnel boring, 5: 34  
Speech, 2: 6, 10, 11, 15-19  
Spending, academic R&D, 1975, 4: Back cover  
Spending, U.S. R&D, 1976, 3: Back cover  
Sperry, Roger, 2: 18, 19, 35  
Spine, human, engineering studies, 6: 29-34  
Spruiell, Joseph, 4: 21
- Stille, John, 4: 21  
Strauss, Robert, 1: 12  
Streicher, Stanley, 5: 25  
Strom, Stephen, 6: 21  
Sullivan, Phil, 1: 13  
Sutherland, Earl, 2: 28  
Suydam, Marilyn, 6: 24-27  
Sykes, Lynn, 4: 8, 11
- T**  
Tarr, John, 6: 27  
Taube, Henry, 5: 29  
Technology and productivity, 5: 2-7  
Technology assessment, 1: 23-28  
Technology education, 3: 29-33  
Tectonics, 6: 2-11; 6: 9-15  
Telescope mirrors, grinding, 6: 16-21  
Temin, Peter, 1: 4  
Tennent, Howard, 2: 29  
Terrace, Herbert S., 2: 8  
Thomas, Eleanor, 5: 7  
Thompson, Richard F., 2: 9, 10  
Thomson, Elihu, 6: 17  
Thorne, Kip, 3: 12  
Tomography, 6: 3-8  
Transportation costs, 1: 5  
Tropsch, Hans, 5: 27  
Trump, John, 3: 23, 24  
Tuazon, Ernesto C., 4: 23  
Tunnel boring, 5: 31-35  
Turoff, Murray, 1: 16-22  
Tycho supernova, 4: 33  
Tyson, J. A., 3: 11
- U**  
Underground excavation, 5: 31-35  
Uphouse, Lynda, 2: 32  
Urban planning technology education, 3: 32  
Usiskin, Zalman, 6: 22-27
- V**  
Valentine, Raymond C., 5: 24, 25  
Vallee, Jacques, 1: 16-22  
van den Bergh, Sidney, 6: 21  
VIBROSEIS system, 6: 14  
Vidcon, 4: 30, 32  
Vocational education, 3: 29  
Volpin, Mark E., 5: 26, 29
- W**  
Walker, Allen, 2: 7  
Walter, Grey, 2: 38  
Wang, K. K., 5: 19  
Wang, William, 2: 18  
Washburn, Sherwood, 2: 5, 6  
Wastewater treatment, 3: 21-24  
Water pollution, 3: 20-24  
Weaver, J. F., 6: 26  
Weber, Joseph, 3: 10-12  
Weiss, Paul, 2: 31  
Whitaker, Harry, 2: 17, 18  
White, James L., 4: 21  
Whitlock, Baird, W., 6: 36, 38, 39  
Whitney, Daniel E., 5: 11-14  
Wiesel, Torsten, 3: 34  
Wilke, Charles W., 5: 22  
Wilkinson, Geoffrey, 5: 27  
Winer, Arthur M., 4: 23  
Williamson, Jeffrey, 1: 3, 4  
Willows, A. O. D., 2: 12  
Wilson, H. R., 2: 23  
Wilson, Reese, 1: 12  
Winograd, Terry, 2: 22  
Wip, Lawrence J., 3: 32, 33  
Wood, Earl H., 6: 5, 6  
Woods Hole, 3: 14  
Woollacott, Marjorie, 2: 12  
Worden, S. P., 6: 21
- X**  
X-ray scanning, dynamic three-dimensional, 6: 3-8
- Y**  
Yeager, Philip B., 1: 24  
Yermakov, Yuri I., 5: 29
- Z**  
Zahalak, George I., 6: 32, 33  
Zaidel, Eran, 2: 17  
Zamaev, Kirill I., 5: 29  
Zoller, William, 4: 24